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AUTHOR Whitehead, LeRoy E.; Munby, Hugh
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ABSTRACT

"My Learning Curve" is a visual rapid appraisal technique that was developed in Canada for exploratory use in one of a series of loosely coupled evaluation studies of a redesigned teacher education plan. It is designed to allow teacher candidates enrolled in the program to depict quickly and visually, rather than verbally, their perceptions of how their rates of professional growth changed over the course of the extended practicum portion of the program. The technique is described and its potential usefulness as an evaluative technique is assessed. "My Learning Curve" is a graph with the number of practicum weeks on the "x" axis. The "y" axis is labeled "learning." Teacher candidates draw lines reflecting their own perceptions of their rates of professional learning. The responses of 31 Canadian teacher candidates in 4 focus groups show that the appraisal technique is effective when used within a focus group setting. The technique appears to have less promise as a stand-alone approach because of difficulties in comparing data. (Contains 3 figures and 10 references.) (SLD)

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"MY LEARNING CURVE": USING VISUAL RAPID APPRAISAL IN THE EVALUATION OF THE EXTENDED PRACTICUM IN A TEACHER EDUCATION PROGRAM[1]

ED 430 022

LeRoy E. Whitehead
Hugh Munby

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Faculty of Education
Queen's University
Kingston, Ontario, K7L 3N6
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Purposes

"My Learning Curve" is a visual rapid appraisal technique that was developed for exploratory use in one of a series of loosely coupled evaluation studies of a redesigned teacher education program. Its purpose was to allow teacher candidates enrolled in the program to depict quickly and visually, rather than verbally, their perceptions of how their rates of professional growth changed over the course of the extended practicum portion of the program. The purposes of this paper are to describe the technique and how it was used, to suggest improvements to it, and to assess its potential usefulness as an evaluative technique.

Perspectives

The visual rapid appraisal technique described is conceptually related to a family of quickly evolving approaches and methods that are currently being used in the field of rural development, and which have been collectively labeled participatory and rural appraisal (PRA). The main thrust of PRA has been to give the intended beneficiaries of rural development projects a much more central and participatory role in the conceptualization, planning and operation of such projects. The main sources and parallels to PRA are activist participatory research, agroecosystem analysis, applied anthropology, field research on farming systems and rapid rural appraisal (Chambers, 1994a, 1994b, 1994c).

The development of participatory evaluation (PE) has been closely linked to the evolution of PRA and its predecessors. The principal idea behind PE has been to make project evaluation

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more people centered and to involve both stakeholders and beneficiaries as active participants in the evaluation process, not just providers of information. The advantages of this approach include increased capacity for decision making among the participants, greater likelihood of collective action being taken, and increased effectiveness of project management (Campos & Coupal, 1996;Guba & Lincoln, 1989). Among the many techniques used in PE are beneficiary assessment, focus groups, semi-structured interviews, testimonials and transect walks. Visual methods of expression have also been shown to be very useful, not only because they allow participation by people who may be illiterate, but also because they allow a lot of information to be expressed in a short time. With the exception of focus groups, semi-structured interviews and similar techniques that are not exclusive to the PE approach, we are not aware of PRA or PE approaches being used in teacher education programs. However, there are examples of their use or planned use in the development of rural schools in Bangladesh and Egypt (Campbell, 1998).

Galluzzo and Craig (1990) have argued that effective program evaluation in teacher education is best conceptualized as a collection of loosely coupled studies conducted by a variety of faculty. The research described here was part of a series of loosely coupled studies that began during the design phase, continued through the pilot year and on into the first year of general implementation of the new program. Several studies were conducted by a group of faculty members and graduate students working in various partnership arrangements (e.g., Lock, et al., 1998; Munby, et al., 1999; Whitehead, et al., 1999). The research reported here took place during the first year of general implementation.

Context

The redesigned program includes a fourteen-week practicum, punctuated by a two-week return to campus mid-way through the practicum term. Not all teacher candidates return to campus at the same time, however. During the general implementation year, about one-quarter of the candidates returned after completing four weeks of practicum, one-quarter after six weeks, one-quarter after eight weeks, and the remainder after ten weeks. The first and second groups returning to campus were composed entirely of primary teacher candidates. The third was a mix of elementary and secondary teacher candidates, while the fourth was composed entirely of secondary candidates. During the practicum term, there was a major confrontation between the provincial government and the province's teacher organizations. The confrontation climaxed with a political protest by the teachers during which virtually every publicly funded school in the province was closed for a two-week period. The period of closure coincided precisely with the two-week period during which the third group of teacher candidates was back on campus.

In addition to increasing the amount of practicum time, another thrust of the redesigned program was to move away from an associate teacher model to an associate school model for the practicum. In the previous associate teacher model, teacher candidates learned a lot about how one or two classrooms operated. The associate school model was designed to help teacher candidates learn more about how the entire school functions as a unit.

As we planned the evaluations of the redesigned program, we were constantly faced with questions about how these varied elements of context might influence our candidates' learning. During one these discussions, the idea of transforming the talk about learning curves into

something that our candidates could draw was advanced by the first author, LeRoy Whitehead. The discussion quickly turned to devising a method to incorporate this idea into an evaluation study.

Method

"My Learning Curve" is simply a piece of paper with the two axes of a blank graph preprinted on it (Figure 1). The "x" axis shows the number of practicum weeks that have elapsed at the time the technique is used. The "y" axis is labeled "Learning" and indicates rates of learning as "small," "medium," and "large." The other side of the paper gives brief written instructions about how to complete the learning curve, including four examples (Figure 2).

A single one-hour focus group interview involving seven or eight teacher candidates was conducted during each of the four "on-campus" periods. A total of 31 teacher candidates participated in one focus group each. Focus group one, composed of eight elementary teacher candidates, completed the technique after four weeks of the extended practicum experience; focus group two, composed of seven elementary candidates, after six weeks; focus group three, a mix of eight elementary and secondary candidates, after eight weeks; and focus group four, composed of eight secondary teacher candidates, after ten weeks.

Each focus group followed a similar pattern: the facilitator introduced for discussion two or three questions that were not directly related to the instrument. Part way through the hour, the learning curve instrument was distributed and introduced by the facilitator, who also pointed out the written instructions. The teacher candidates were then asked to visually represent their rates of professional learning to that point in the practicum by drawing a line on the blank graph. Some candidates completed their graphs within a few seconds, while others spent up to five minutes in reflection before completing theirs. Following completion of the graphs, time was allotted for the candidates to discuss their responses. Finally, additional questions, unrelated to the instrument, were discussed. Each session was recorded, and a transcript of each session was produced.

Results

The teacher candidates readily understood the concept of "My Learning Curve" and appeared not to be unduly influenced by the examples given in the instructions. They drew a wide variety of lines representing their perceptions of their own rates of professional learning. Some examples are shown in Figure 3. The transcripts of the four sessions show that the candidates, without exception, were able to provide clear and reasonable explanations as to why they drew their learning curve representations as they did, regardless of whether they took a few seconds or several minutes to complete the exercise. A few candidates spontaneously wrote explanatory notes on their graphs, which added additional insight into their thinking. In future, it might be useful to ask for and encourage such notations. The technique did simplify the discussion of a complex topic, and allowed it to be dealt with in the focus group setting in less time than would have been the case otherwise.

An attempt to compare the four respondent groups using the learning curve graphs alone proved to be very difficult. Since there were only 31 respondents, we were able to "eyeball" the data for patterns, but clearly more sophisticated analytical techniques must be developed if this type of instrument is to be used on a large-scale basis as an independent source of data for comparing groups. The patterns for the first two focus groups were similar: starting points for the candidate's graphs were quite divergent, ranging from small to large, but they tended to end up in a more convergent grouping in the range between moderate and large. The results for groups three and four were quite different, with both groups having both very divergent starting and ending points. Thus the technique did distinguish between groups that were quite different. Groups one and two were all elementary teacher candidates, and participated in their focus groups before the disruption and extreme emotional turmoil of the political protest. Groups three and four were composed partly or wholly of secondary teacher candidates who participated in their focus groups during or immediately following the political protest. It should be noted that the province's secondary-school teachers, as a group, seemed much more militant before, during, and after the protest than did the elementary-school teachers.

With regard to individual respondents, no clear pattern or set of patterns emerged. Perhaps the samples were too small. Furthermore, it was difficult to make confident comparisons between the graphs because we did not supply any explanation of what we meant by "professional learning," nor of what constituted small, moderate or large rates of professional learning. In future, if completed graphs are to be used as independent sources of data, serious consideration would have to be given to these sorts of issues.

However, when the graphs and the transcripts of the discussion were taken together as joint sources of data, the usefulness of the results was quite different. The activity of drawing the graph appears to have served as a catalyst, producing lively discussion and insights that otherwise would have been less likely to come to light or that would have taken longer to do so. In this context, it did not seem to matter that a definition of professional learning had not been supplied, nor that some form of rubric or metric for judging small, medium and large rates of professional learning had not been supplied. Indeed, some significant insights from the data related to the ways in which the candidates themselves seemed to be defining professional learning.

For example, candidates in focus group four participated in the study immediately after the two-week period of the protest and many of them had participated in the picket lines. During the focus group discussion, some of them talked about their experiences during the protest. One candidate said:

> I had my learning curve where I started off learning constantly. I found that just learning kids' names, how they mingle, and how to get a classroom started the first day of school—I just found there was SO much I learned from my associate teachers. They were incredible. So, I mean, I had a couple of droops in between—just times where maybe I wasn't doing too much in terms of stress—trying to get everything done—so I didn't feel I was learning a lot. For myself, with the strike, I didn't think I was really learning a lot—I found that after the first day I knew what "middle finger" meant—I knew what this meant—and.... Anyway, I did learn a lot about the politics within the school, which was interesting because there was SO much that you kind of get glimpses of here and there. The departments, like, you don't get grants there, and people are bitter and.... people cross the line, and you get to hear what's going on.

This candidate's graph (Figure 3a) included some written comments. The learning curve for weeks one through seven indicates a generally high level of learning (with two "droops" as indicated), and the written comment related to these weeks says:

> (in school) I found I learned a great deal during the first few weeks—everything was new.

In comparison, the learning curve for the weeks of the political action indicates an extremely small rate of learning, yet the written comment relating to this period says:

> During this period I learned a great deal about the politics of the education system. However I feel I lacked the in-class learning.

Taken together, the discussion comments and the graph with its written comments show that even though this candidate felt that he or she had learned a great deal about the politics of education as a result of the political action, for him or her the politics of education did not fall within the definition of professional learning. For this candidate, at least at this career stage, professional learning seems to be restricted to learning that is focused in the classroom.

Several candidates revealed insights about how they rank learning about school and classroom routines in their inventories of professional learning. Clearly, learning about such routines, though perhaps useful, is not as significant as actual practice in presenting lessons. For example, one candidate's graph (Figure 3b) shows a plateau at a fairly small rate of professional learning during the first week, another plateau near the moderate level in the second week, followed by a steady rise to a fairly large rate in week five. (It is interesting to note that this candidate has re-calibrated the "y" axis.) A regression is then followed by another steady rise to a large rate. During the discussion, this candidate explained her graph this way:

> Anyway, so I started off [week one] learning sort of administrative stuff—where do the teachers meet, where to eat lunch, blah, blah, blah. I started observing [week two], and taking in a lot more things. And then [weeks three to five] I started teaching and that was, like, way up. I learned a lot. And then I took on three full course loads and then I dropped. I was stressed out. And I'm, like, "...this is insane. This is crazy." So my learning—it's not that I wasn't learning, I was definitely learning but I just don't think I was seeing it because I was too overwhelmed with lesson planning, lesson planning.... Then the strike came. And I was glad. I was honestly glad! Because I think I was at a really low point in my sort of four months and I was just, like, "I really need this break. This is just so nice."

This candidate's discussion comments and learning curve graph together vividly illustrate the relative degree of centrality that he or she assigns to "administrative stuff," to observing (presumably classroom observation) and to "teaching" (presumably presenting lessons, given the remarks about lesson plans) in his/her definition of professional learning.

A candidate in the second focus group (Figure 3c) drew a brief plateau at the moderate level for what looks like a period equal to one or two days. This is followed by a very steep rise to a plateau at the large level for the remaining six weeks shown on the graph. During the discussion this candidate said:

> My first day was just a lot of introductory songs and games—I was in a grade one class. Grade one/two. And getting to know the children and setting up their routines and stuff. And I was learning a lot in that—learning the names and setting up the routines. And then right after the first and second day, every single

> day I was learning so much, and discussing with my associate teacher and my fellow teacher candidates. And so you had a large amount of learning pretty well every day, right up to the end.

Another candidate, also in focus group two and apparently assigned to the same classroom and associate teacher as the previous candidate, drew a straight line across the graph at the large level (Figure 3d). The candidate said:

> Mine was—I drew a straight line in the large category because I went into my class—I was in the same class, [grade] one/two, and I had pretty much no primary experience. I had planned to upgrade to intermediate qualifications, so I had most of my [previous] experiences with older children. So I went in knowing pretty much nothing about primary kids. And the way the classroom was set up was pretty much all activity centers, and I had no experience of that. I'd heard of that but I'd never seen how it worked. So basically I was learning right from day one, like "How is she going to organize this? How is she going to make this not so chaotic? How does she explain the centers to the children? How do they know what to do every minute of the day?" So I was learning non-stop from day one, and I really enjoyed it. I loved it.

This candidate has explained her or his perception of a consistently large rate of professional learning with a comment that focuses virtually exclusively on the method used to present the curriculum in the classroom. Virtually no mention is made of school or classroom routines.

There was a very clear tendency throughout the responses to equate important professional learning with learning about classroom management, lesson planning and lesson presentation. The following comment and its associated learning curve (Figure 3e) from a teacher candidate in focus group three help to illustrate the centrality of classroom management techniques in the candidates' definition of professional learning:

> I started off with a large amount of learning, then it just went to a moderate level and leveled off. And the reason why I chose this sort of curve is because, when I first went there, I learned a TON of classroom management techniques. And I TOTALLY—my associate and I [had] very similar teaching styles, so I got a lot out of her. So I totally learned—I basically found my own teaching style. And then things got more routine, like, I was in charge of math always.... And at the beginning there were barbecues and staff meetings, and I learned how to run barbecues. And student council started, and I was part of the committee there. And drama. So all this stuff was new. And then I kept learning stuff every day, but it's not quite the amount that I was learning before, but that's fine. I think it's great.

Another candidate from the same focus group reveals the relative importance of observing versus doing (Figure 3f):

> I guess I felt that I wasn't learning that much at the beginning. There wasn't a lot of time for my associate to spend with me for the first little while. The principal had decreed that we wouldn't teach for the first two weeks, but I snuck in and started to teach in the second week, of course. So I guess I felt at the beginning that I wasn't doing that much that I hadn't done before in the concurrent program. And then by week three I was teaching more frequently. And around week six or seven, my learning went up a lot because [associate teacher] got sick and there was a substitute teacher, and I was responsible for [associate teacher's] classes for several days over a two-week period. So I felt I had learned a lot because I still had someone to fall back on, but it wasn't someone who was as responsible for the class as I was. I felt I got a lot out of that teaching experience, and then the last week, with the strike, the impending strike, and the fact that I was leaving and had assignments to do, the learning went down a little.

A third candidate from focus group three talked about the relative value of procedural learning versus presenting lessons (Figure 3g):

> My curve—I started off saying it was moderate for the first two weeks. And really, when I think about it, I was learning a large volume of information, but it was more procedural—how the school operates, and "this is how we get through the day." It was a lot of information, but it really wasn't professional growth, I don't think, because I would learn that no matter where I go. And I think I really started learning a LOT once I started teaching myself, and I was learning a lot more about actual instruction and classroom management and how I felt I could contribute to the class. And I think it just sort of plateaued; I learned a lot as I continued teaching for the next couple of weeks, and it just sort of trucked along.... And even though the last week was a bit anti-climactic—we knew we were leaving and that there was a strike pending, and that sort of thing—there were still a lot of really valuable things that I did that week.... I was trying to wrap up units and that sort of thing. So I think I learned a lot!

This candidate's written comment under the moderate level plateau reads:

> mostly observational,

while the written comment under the large level plateau reads:

> mostly experiential or interactive (with staff and students).

The importance of conceptualizing and planning one's own lessons comes out in these comments from a candidate in focus group three (Figure 3h):

> My learning curve looks like a molehill. It starts off with moderate learning. The very first day I was in the class I taught. And then as the weeks progressed, she just gave more and more of the subjects over, and so my learning curve quickly increases. And then it hits its peak probably around the end of September when I was walking into the class and teaching the whole day. And then as the units progressed, because the first couple she let me do just whatever I wanted—"We're doing the rainforest; go ahead, take whatever you want." And then as the weeks progressed, she started saying, "We would rather you do these units." So she was giving me the units, and I feel that the learning curve started to come down and the job became more of a routine. You know, she gave me the information and I would teach it type of stuff? I was still learning a lot about lesson plans and development and stuff like that but I guess by then it was kind of [undecipherable] as moderate.

Conclusions

Methodologically, the study showed that the visual rapid appraisal technique described was effective when used within the focus group setting with a group of teacher candidates to elicit data about their experiences during the first part of an extended practicum. The technique simplified and shortened this discussion of a complex issue while leading to significant research findings It appears to have less promise as a stand-alone data gathering technique for comparing groups or individuals, because of difficulties in comparing the data. That is, it does not show promise as a quantitative technique unless some sophisticated analytical techniques are developed to use with it. The researchers' not providing a definition of professional learning nor a rubric for judging small, medium and large rates of professional growth, in the end, helped to bring to light information that otherwise might not have come to light. The results of this study show that further experimentation with visual rapid appraisal techniques, and perhaps with other techniques borrowed from the field of rural development may lead to a significantly enhanced methodological repertoire for "mainstream" educational research.

Substantively, the activity of drawing the graph appears to have served as a catalyst, producing valuable discussion and insights that otherwise might have been more difficult to achieve. These insights centered on how the candidates themselves were defining professional learning. For example, learning about the political aspect of schooling appears to hold a peripheral position in the candidates' definition of professional learning, while learning about classroom management, lesson planning and presenting lessons to class groups appears to be the most central items in the definition. Items falling in between the center and the periphery include school administrative routines and classroom routines, working with small groups or even one-on-one teaching-learning situations. These findings may seem intuitive to those who have had an association with preservice teacher education for any length of time, and indeed they are. However, for a redesigned program that hopes to move away from an associate teacher model toward an associate school model specifically to encourage a very broad conceptualization of professional learning, these insights are significant, but unsettling findings. The redesigned program may need to consciously engage preservice teachers in discussions about what constitutes professional learning and why.

Figure 1
'My Learning Curve"

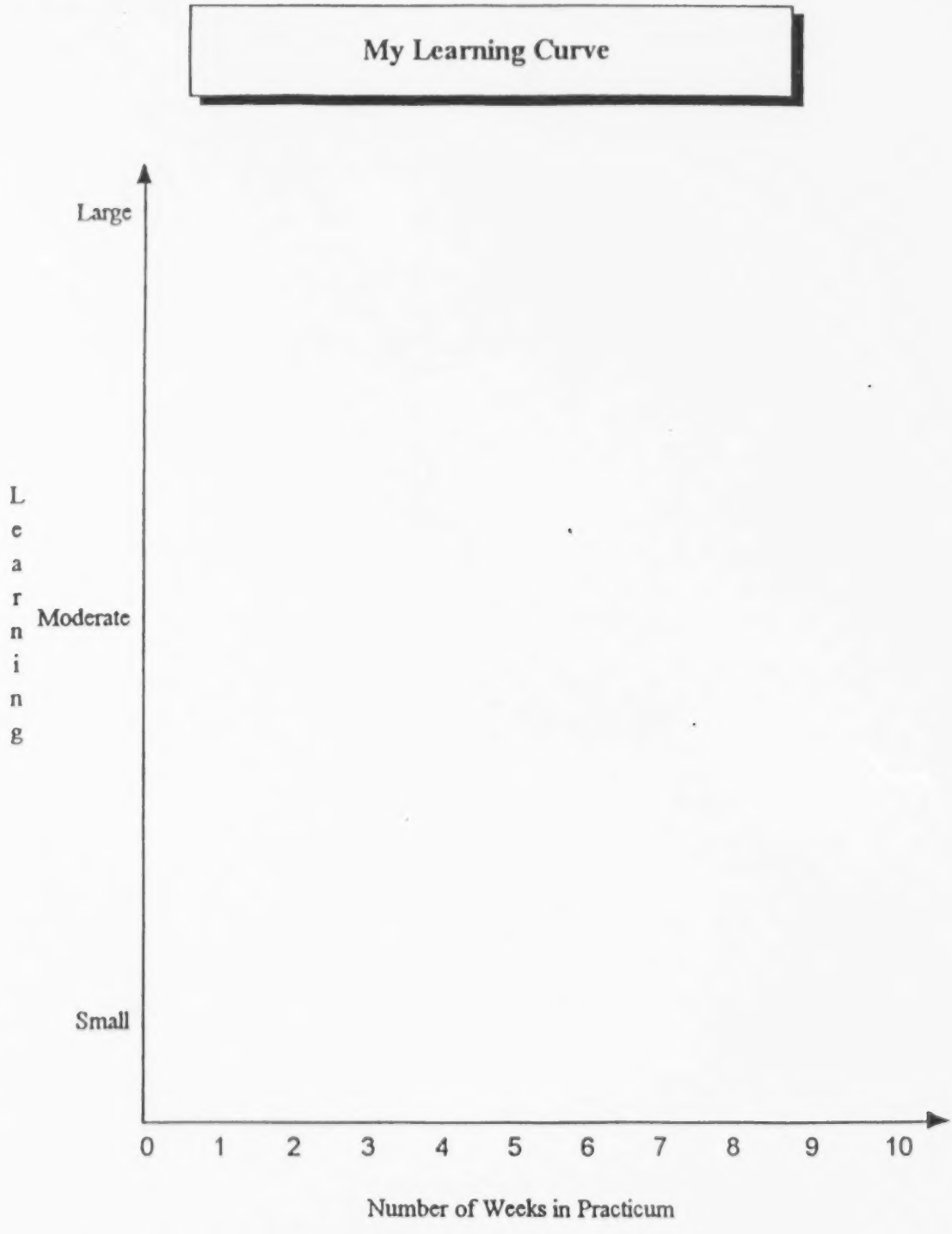
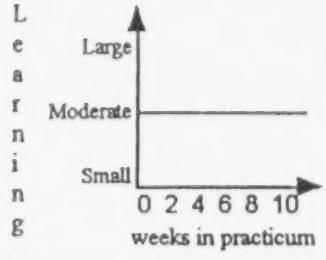


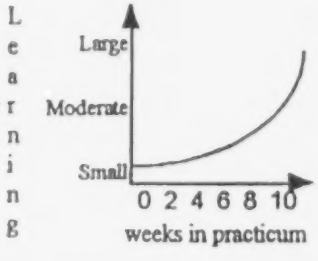
Figure 2
Written Instructions for 'My Learning Curve'

Group Interview
Fall 1997

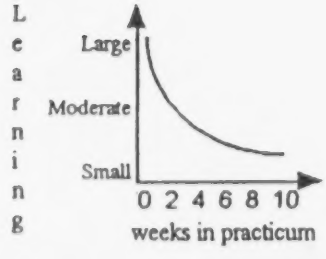
You have been in your school for 10 weeks now. We are interested in how you would describe your professional learning during that time. Here are four examples of learning curves.



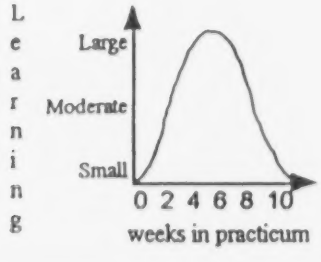
Example 1: This candidate learned a moderate amount each week of the practicum.



Example 2: This candidate learned a small amount at the beginning and increased her learning as the practicum continued.



Example 3: This candidate learned a large amount at the beginning and experienced less learning as the practicum continued.

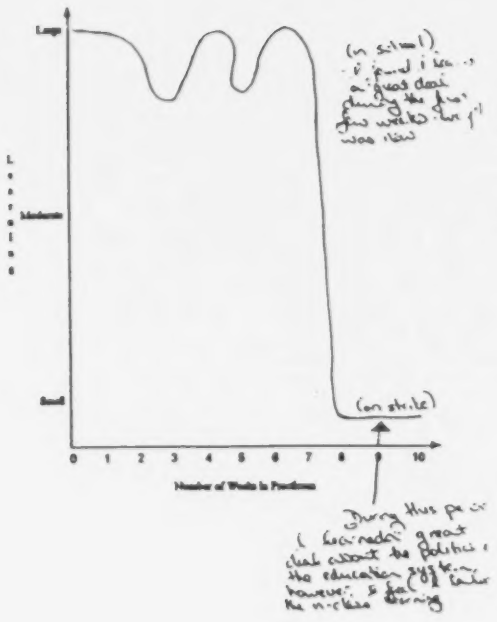


Example 4: This candidate learned a small amount at the beginning, an increasing amount toward the middle, and a decreasing amount more recently in the practicum.

Now, draw your own learning curve on the back of this page.

Figure 3
Sample of Completed Learning Curves

3a.



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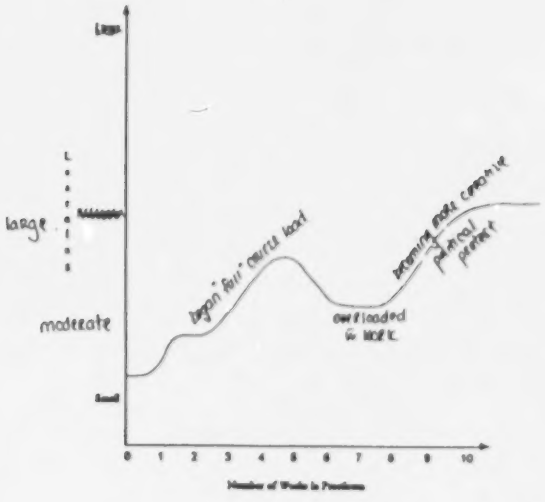

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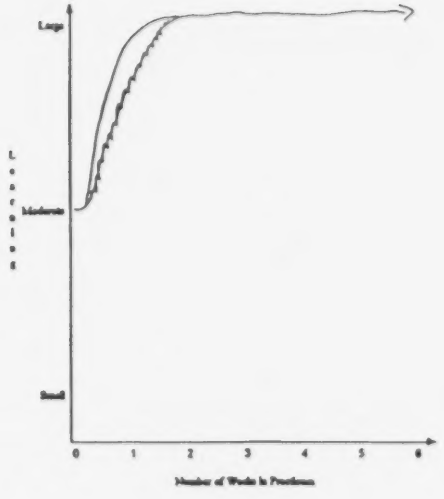

3d.

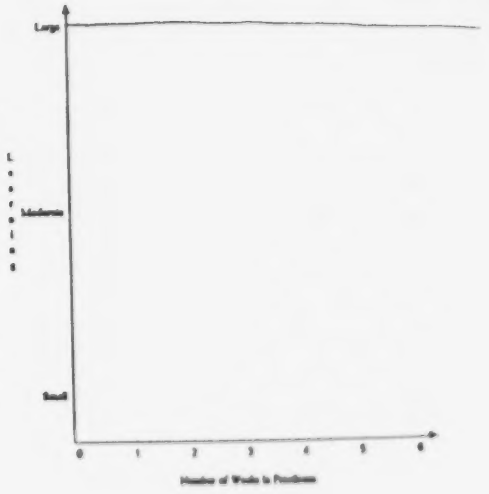

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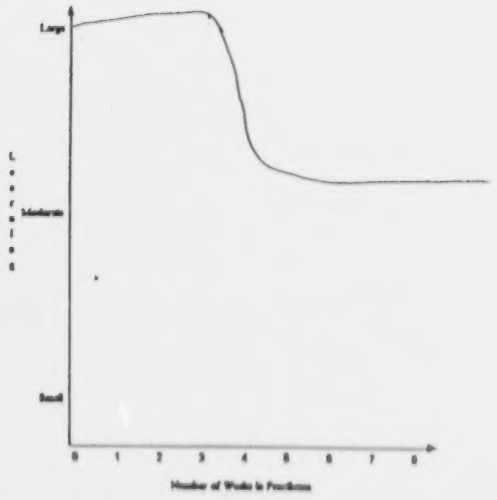
Figure 3 (Continued)

3e.



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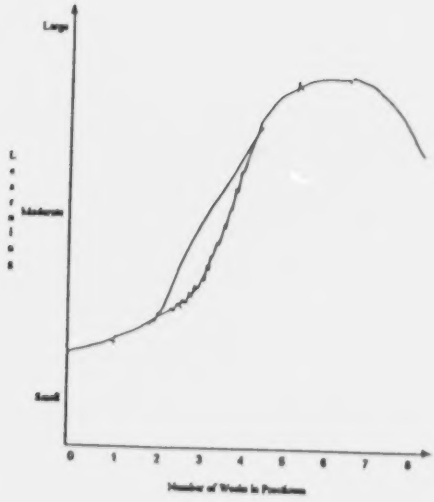
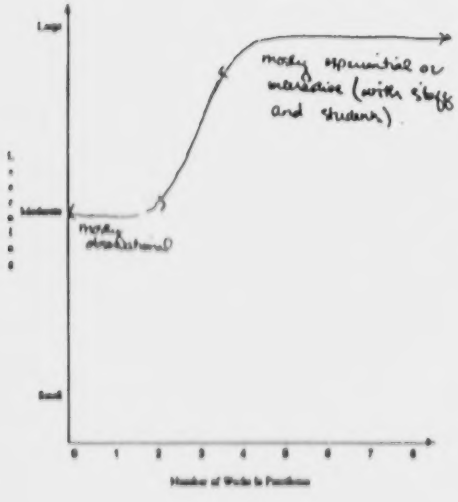
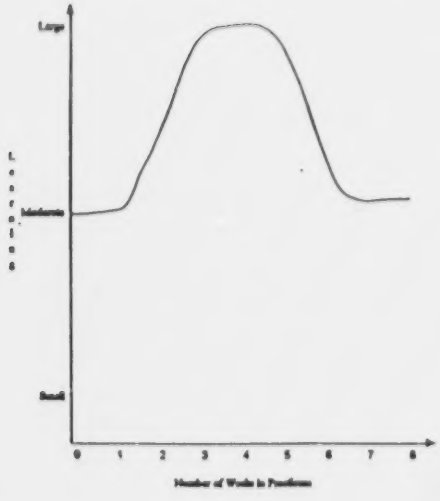


3g.



3h.



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